

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



Walter H. Swingle

2  
(B. P. I.—271.)

5c  
Reissued, January 13, 1911

U. S. DEPARTMENT OF AGRICULTURE,

2A 2 U.S. BUREAU OF PLANT INDUSTRY,

Office of Crop Physiology and Breeding Investigations,

5c  
Washington, D. C.

3  
STARTING A SEEDLING DATE ORCHARD

Imported offshoots of the best varieties of date palms are expensive and difficult to secure. Moreover, since the date palm, unlike ordinary fruit trees, can not be grafted, it is essential to know in advance what sorts can be grown with reasonable hope of success. If by any chance the wrong varieties should be planted, the orchard is likely to prove a total loss, as the palms would have to be destroyed to make place for others better suited to the locality. If 50 offshoots are planted per acre, the initial expense for the offshoots and planting will amount to from \$200 to \$400 per acre, and the offshoots must be cared for very carefully during the first year and protected in winter. Before such a plantation comes into bearing it will have cost from \$300 to \$600 per acre.

It is possible to start a seedling date orchard at very little expense and with reasonable hope of commercial success, and with a good chance of securing superlatively fine varieties which can be gotten in no other way. It is true that date varieties do not come true to seed, and about one-half of the seedlings are male, but it has been found, nevertheless, that in the warmer parts of Arizona and southeastern California a considerable proportion of the seedlings yield edible fruit. In the Salton Basin, for instance, it is safe to count on nearly half of the female trees yielding marketable fruit, although, of course, they would vary widely in time of ripening and in quality of fruit. When seed of good varieties is planted, from one-tenth to one-fourth of the fertile trees will probably yield fruit of first quality.

The seed should be planted rather thickly in well-drained beds of fertile soil, free from alkali. These beds should be watered frequently, as the young date seedlings need an abundance of moisture. If properly cared for, the seedlings will reach a height of from 12 to 18 inches the first year and can be transplanted into the permanent orchard the second year.

These seedlings should be set out in rows about 30 feet apart and placed 5 or 6 feet apart in the row. Ordinary field crops can be grown between the rows until long after the palms come into bearing. After three or four years, when the young palms begin to flower, the male trees can be dug up and destroyed, thus thinning out about half of the trees. Then, when the female trees come into fruit, those which yield decidedly inferior fruit can also be removed, so that finally about one-fourth of the original number of seedlings will be left standing. The spaces between the seedlings will be irregular, and offshoots can be taken from the best sorts and planted where the largest gaps occur.

By preventing offshoots from growing on the poorer sorts they will yield more fruit and finally can be destroyed and replaced by offshoots of some of the better sorts. In this way, by degrees, the orchard can be improved without expense for offshoots aside from the labor of planting them.

There can be no question that among the seedlings grown from the seed of the best existing varieties there is a very good chance to secure sorts better adapted to the soil and climatic conditions of different regions than can possibly be obtained by importation from abroad, and there is always the chance of securing some extraordinarily valuable sort, the offshoots of which would, of course, have a very high value. Then, too, there is no danger of introducing diseases or insects.

For each 250 date seedlings set out in proper form in a suitable locality, the Department of Agriculture will give, until further notice, one or two offshoots from imported date palms, the number depending on the scarcity of the variety, with the condition that no one grower or company shall receive more than 50 offshoots in any one year and that the department does not bind itself to supply more than such portion as it can spare from the natural increase of the date palms at its cooperative and other



date gardens. This would mean that for each 10 acres set out to seedling dates, from 12 to 24 imported offshoots would be given, enough to plant from one-fourth an acre to one-half an acre, on condition that the accredited agents of the Department of Agriculture have the right to visit the date gardens and examine the seedlings, give advice about the varieties to be retained and those to be destroyed, and have the right to take one offshoot from each seedling variety that may be desired for further study.

Planters who undertake to set out seedling orchards will be given the preference in arranging for the distribution of imported offshoots and will be supplied in the order of their applications as long as the supply of offshoots holds out. In addition, they will have the right to all the offshoots which are produced by the imported palms given them as a bonus, and will not be required, as are all other recipients, to give one-half of the offshoots to the Department of Agriculture.

Under these terms, therefore, it is possible for the grower to establish a fair-sized orchard of date palms at a very little expense beyond the labor of caring for the same. Even supposing that the seedlings prove of very little value, the grower would still have from one-fortieth to one-twentieth of the orchard planted to choice imported offshoots adapted to his soil and climate. After these had been set out for from five to six years, he would get on an average one offshoot a year from each palm for from five to ten years; that is, by the time the seedlings were in full bearing, say five years after planting, he would have every year enough offshoots from each acre planted to imported varieties to plant 1 acre additional, which would practically insure him against loss, even in the very improbable event that none of the seedlings proved valuable.

The Department of Agriculture has on hand some thousands of seeds of the choicest varieties of the world. These are now available for distribution and will be sent to any applicant who will give a detailed statement regarding his land—the exact location, township, range, section, quarter-section, etc., character of the soil, facilities for irrigation, and such other information as may be pertinent.

It may be stated that in the hottest regions a large proportion of the female date palms yields marketable fruit, while in colder situations many of them do not come to full maturity. Such seedling orchards are therefore most promising in the Salton Basin, Salt River and Gila River Valleys in Arizona, and the valley of the Colorado River from Needles to Yuma. However, in case settlers in the interior valleys of California or other localities not hot enough to grow late varieties wish to set out seedling orchards, they will be sent seeds of the earliest varieties and will be given imported offshoots of the earliest sorts which are most likely to ripen in their locality.

WALTER T. SWINGLE.

*Physiologist in Charge.*

Approved:

B. T. GALLOWAY.

*Chief of Bureau.*

JANUARY 24, 1908.

○

